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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jeffrey Wannamaker

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EXAMINER

NEWAY, SAMUEL G

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/789,401	Applicant(s) WANNAMAKER ET AL.	
	Examiner Samuel G. Neway	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/20/06, 05/28/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 1 – 30 are pending and considered below.

DETAILED ACTION

Claim Objections

2. Claims 9 – 12, 14 – 15, and 25 are objected to because of the following informalities:

Claims 9 – 10 depend on claim 1 and state a “Java class file”, which only appears in claim 2. It is believed claims 9 – 10 should depend on claim 2 and are treated as such below. Appropriate correction is required.

Claims 11 and 15 recite the limitation “said java application”. There is insufficient antecedent basis for this limitation in the claims. However, it is believed the claims should depend on claim 3 and are treated as such below.

Claim 12 recites the limitation “said application file”. There is insufficient antecedent basis for this limitation in the claims. However, it is believed the limitation should read “said java application file” and the claim should depend on claim 3 and will be considered as such below.

Claim 14 recites the limitation “said identified java method”. There is insufficient antecedent basis for this limitation in the claim. However, it is believed the claim should depend on claim 3 and is treated as such below.

Claim 25 recites the limitation “said java application”. There is insufficient antecedent basis for this limitation in the claim. However, it is believed the claim should depend on claim 18 and is treated as such below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 – 30 rejected under 35 U.S.C. 102(e) as being anticipated by Beadle et al. (US Patent 6,530,075).

Claim 1:

Beadle discloses a tool for processing a p-code file, comprising:

analyzing said p-code file to identify those p-code methods within the file having associated with them at least one profile parameter above a threshold level (col. 4, lines 5-9);

and annotating said identified p-code methods in a manner adapted to enable preferential processing of said identified p-code methods by a compiler (col. 4, lines 9-11)

Claim 2:

Beadle discloses the tool of claim 1, wherein:

said p-code file comprises one of a Java class file, a C# file, an o-code file and a ground Java file (col. 10, lines 33-38).

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Claim 3:

Beadle discloses the tool of claim 1, wherein:

said p-code file comprises a Java application file including Java classes, said Java class being annotated in a manner adapted to enable preferential processing of said identified Java classes by a Java virtual machine (VM) just-in-time (JIT) compiler (col.4, lines 44-53).

Claims 4, 5:

Beadle discloses the tool of claim 1, wherein:

said annotations are provided in-line or as a separate file with said identified p-code methods (col. 2, lines 38-44).

Claim 6:

Beadle discloses the tool of claim 1, wherein:

said at least one profile parameter comprises at least one of a method execution time, a frequency of method invocation, a number of instructions and a use of loop structures (col. 5, lines 19-24, col. 8, lines 13-21).

Claims 7, 8:

Beadle the tool of claim 1, wherein:

said at least one profile parameter comprises at least one of an execution time parameter, an input/output utilization parameter one of a static profile parameter, a dynamic profile parameter and a processor utilization parameter (col. 5, lines 19-24, col. 8, lines 13-21).

Claim 9:

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Beadle discloses the tool of claim 2, wherein:

said annotation comprises setting a normally unused bit within a method access flag field of an identified Java class file ("keywords extensions", col. 4, lines 53-64).

Claim 10:

The tool of claim 2, wherein:

said annotation comprises selectively setting each of a plurality of normally unused bits within a method access flag field ("keywords extensions") of an identified Java class file, wherein said unused bits are selectively set to define thereby a priority level ("hot spot", col. 5, lines 43-51) of a respective annotated method .

Claim 11:

Beadle discloses the tool of claim 3, wherein:

each identified byte-code portion of said java application is associated with one of a plurality of priority levels ("hot spot"), said annotation being indicative of respective priority levels ("OPTIMIZE_JIT...", col. 4, lines 53-65).

Claims 12, 13:

Beadle disclose the tool of claim 3, further comprising:

selectively pre-compiling at least a portion of said application file included within a virtual machine (col. 5, lines 48-51, 59-63).

Claim 14:

Beadle disclose the tool of claim 3, wherein:

only a portion ("only the sections of source code") of said identified Java method is annotated in a manner adapted for subsequent compilation, said java method

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being annotated in a manner defining start and end byte code positions within said identified java method (col. 5, lines 43-51).

Claim 15:

Beadle discloses the tool of claim 3, wherein:

said Java application file comprises a ground java application file (col. 10, lines 33-38).

Claim 16:

Beadle discloses a method of adapting the interpretation of a p-code method by a virtual machine (VM), comprising:

compiling p-code methods associated with compilation indicative annotation (col. 4, lines 9-11);

and storing said compiled p-code methods in a cache for subsequent execution in place of corresponding interpreted p-code methods (col. 2, lines 14-17).

Claim 17:

Beadle discloses the method of claim 16, wherein:

said p-code methods are provided via one of a Java class file, a C# file, an o-code file and a ground Java file (col. 10, lines 33-38).

Claim 18:

Beadle discloses the method of claim 16, wherein:

said p-code file comprises a Java application file including Java classes and annotated Java classes, said annotated Java classes being preferentially compiled by a Java virtual machine (VM) just-in-time (JIT) compiler (col. 4, lines 44-53).

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Claims 19, 20:

Beadle discloses the method of claim 16, wherein said annotations are provided in-line or as a separate file with said identified p-code methods (col. 2, lines 38-43).

Claims 21, 22:

Beadle discloses the method of claim 16, further comprising:

in response to cache memory utilization above a threshold level, prioritizing the contents of said cache memory by deleting from said cache compiled code associated with the least recently executed method ("optimization might be based on ... the memory needed", col. 5, lines 19-23).

Claim 23:

Beadle discloses the method of claim 21, wherein:

said cache memory contents are prioritized by deleting from said cache compiled code associated with a previously compiled method having a lower priority level than a presently compiled method ("optimization might be based on ... the time compilation takes", col. 5, lines 19-23).

Claim 24:

Beadle discloses the method of claim 20, wherein:

compiled byte-code stored in said cache is accessed via a cache map, said cache map being updated in response to a change in cache utilization("class to be loaded", col. 6, lines 36-52).

Claims 25 – 27:

Beadle discloses the method of claim 18, further comprising:

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compiling non-annotated byte-code within said Java application if said non-annotated byte-code utilizes VM resources beyond a threshold level, said compiled non-annotated byte-code is assigned a priority level and said priority level of said annotated byte-code is further adapted in accordance with said utilized VM resources (col. 6, lines 2-4).

Claims 28, 29:

Beadle discloses the method of claim 20, further comprising:

said compiled annotated byte-code are assigned a priority level and said priority level of said annotated byte-code is further adapted in accordance with said utilized VM resources ("optimization might be based on ...", col. 5, lines 19-23).

Claim 30:

Beadle discloses the method of claim 26, wherein:

said VM resources comprise at least one of an execution time parameter, an input/output utilization parameter and a processor utilization parameter (col. 5, lines 19-24, col. 8, lines 13-21).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Neway whose telephone number is 571-270-1058. The examiner can normally be reached on Mon - Thur 8:00AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 571-270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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James W. Myhre
Supervisory Patent Examiner